AMENDMENTS TO THE CLAIMS

1-10. (Canceled)

11. (Currently amended) A non-volatile memory cell comprising:

a germanium selenide glass comprising silver, said germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein $39 \leq x \leq 42$ and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

a first electrode and a second electrode ~~electrically coupled to~~ in electrical communication with said germanium selenide glass.

12-23. (Canceled)

24. (Currently amended) A memory cell comprising:

a germanium selenide glass comprising silver, said germanium selenide glass having the formula $(Ge_xSe_{1-x})_{1-y}Ag_y$ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein ~~$18 \leq x \leq 28$~~ x is at least 40 and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

at least two electrodes ~~electrically coupled to~~ separated by at least a portion of said germanium selenide glass.

25. (Currently amended) A memory cell comprising:

a germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein x is about 40 and y corresponds to a

stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

at least two electrodes ~~electrically coupled to~~ in electrical communication with said germanium selenide glass.

26. (Canceled)

27. (Currently amended) A method of forming a memory cell comprising the steps of:

providing a germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein ~~$18 \leq x \leq 28$~~ x is at least 39, over a substrate, and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

forming at least two electrodes electrically coupled to said germanium selenide glass at locations which permit said glass to transition between high and low resistance states in response to signals applied to said electrodes.

28. (Currently amended) The method of claim 27, wherein x=[[23]] 40.

29. (Currently amended) The method of claim 27, wherein x=[[25]] 41.

30. (Currently amended) The method of claim 27, wherein x=[[20]] 42.

31. (Currently amended) A method of forming a memory cell, comprising:

providing a germanium selenide glass having the formula (Ge_xSe_{100-x}), wherein $39 \leq x \leq 42$; and adding an amount of silver to said germanium selenide glass corresponding to a stoichiometric amount suitable to maintain said

germanium selenide glass in a non-crystalline state; and,

providing at least two electrodes electrically coupled to said germanium selenide glass at locations which permit said electrodes to apply bipolar charge across said germanium selenide glass.

32. (Currently amended) A method of operating a memory cell, comprising:

applying a voltage across a germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein ~~$18 \leq x \leq 28$~~ x is at least 39 and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state, said voltage application changing a resistance state of said glass.

33. (Currently amended) The method of claim 32, wherein x=[[23]] 40.

34. (Currently amended) The method of claim 32, wherein x=[[25]] 41.

35. (Currently amended) The method of claim 32, wherein x=[[20]] 42.

36. (Currently amended) A method of operating a memory cell, comprising:

applying a voltage across a germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein $39 \leq x \leq 42$ and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state, said voltage application changing a resistance state of said glass.

37. (Currently amended) A processor system comprising:

a processor; and

an integrated circuit coupled to said processor, at least one of said processor and integrated circuit including a memory cell, said memory cell comprising:

a germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein ~~$18 \leq x \leq 28$~~ x is at least 39 and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

at least two electrodes electrically coupled to said germanium selenide glass, said germanium selenide glass changing a resistance state in response to application of a voltage across said at least two electrodes.

38. (Original) The processor system of claim 37, wherein said processor and said integrated circuit are integrated on same chip.

39. (Currently amended) The processor system of claim 37, wherein x=[[23]] 40.

40. (Currently amended) The processor system of claim 37, wherein x=[[25]] 41.

41. (Currently amended) The processor system of claim 37, wherein x=[[20]] 42.

42. (Currently amended) A processor system comprising:

a processor; and

an integrated circuit coupled to said processor, at least one of said processor and integrated circuit including a memory cell, said memory cell comprising:

a germanium selenide glass having the formula ~~$(Ge_xSe_{1-x})_{1-y}Ag_y$~~ $(Ge_xSe_{100-x})_{100-y}Ag_y$, wherein $39 \leq x \leq 42$ and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

at least two electrodes electrically coupled to said germanium selenide glass, said germanium selenide glass changing a resistance state in response to application of a voltage across said at least two electrodes.

43. (Original) The processor-based system of claim 42, wherein said processor and said integrated circuit are integrated on same chip.